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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/618,079

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Qiang Shen

VIA-002-PAP

3636

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03/26/2008

EXAMINER

MILLER, BRANDON J

ART UNIT

PAPER NUMBER

2617

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/618,079	Applicant(s) SHEN ET AL.	
	Examiner BRANDON J. MILLER	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 December 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-14,16-27,29-40 and 42-52 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-14,16-27,29-40 and 42-52 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

Disposition of Claims

- I. Claims 1, 3-14, 16-27, 29-40, and 42-52 remain pending in the application.

Allowable Subject Matter

- II. The following is a statement of reasons for the indication of allowable subject matter:

Claim 1 recites a method for a system for communicating data signals using a spread spectrum cellular network, comprising...a mobile unit with a structure as defined in the specification (pages 7-14) including means for receiving a signal of another of the plurality of base stations (target base station); and means for determining an interference density to the target base station from the received signal including: i) means for selecting a code sequence that is at least quasi-orthogonal to all Orthogonal code sequences currently employed by the target base station, ii) means for synchronizing the selected Orthogonal code sequence with an Orthogonal code sequence boundary of the target base station's pilot sequence, ii) means for correlating the received signal with a corresponding P/N sequence of the target base station and also with the selected Orthogonal code sequence, and iii) means for determining an energy of the target P/N correlated, selected code correlated received signal.

Applicant's independent claim 1 comprises a particular combination of elements, which is neither taught nor suggested by the prior art.

Claims 3-13 are allowable based on their dependence of independent claim 1.

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Claim 14 recites a mobile unit for communicating data signals using a spread spectrum cellular network with a structure as defined in the specification (pages 7-14) including means for receiving a signal of another of the plurality of base stations (target base station); and means for determining an interference density to the target base station from the received signal including:

- i) means for selecting a code sequence that is at least quasi-orthogonal to all Orthogonal code sequences currently employed by the target base station,
- ii) means for synchronizing the selected Orthogonal code sequence with an Orthogonal code sequence boundary of the target base station's pilot sequence,
- ii) means for correlating the received signal with a corresponding P/N sequence of the target base station and also with the selected Orthogonal code sequence, and
- iii) means for determining an energy of the target P/N correlated, selected code correlated received signal.

Applicant's independent claim 14 comprises a particular combination of elements, which is neither taught nor suggested by the prior art.

Claims 16-26 are allowable based on their dependence of independent claim 14.

Claim 27 recites a method of communicating data signals using a spread spectrum cellular network with steps as defined in the specification (pages 7-14) including receiving a signal of another of the plurality of base stations (target base station); and determining an interference density to the target base station from the received signal including: i) selecting a code sequence that is at least quasi-orthogonal to all Orthogonal code sequences currently employed by the target base station, ii) synchronizing the selected Orthogonal code sequence with an Orthogonal code sequence boundary of the target base station's pilot sequence, ii)

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correlating the received signal with a corresponding P/N sequence of the target base station and also with the selected Orthogonal code sequence, and iii) determining an energy of the target P/N correlated, selected code correlated received signal.

Applicant's independent claim 27 comprises a particular combination of elements, which is neither taught nor suggested by the prior art.

Claims 29-39 are allowable based on their dependence of independent claim 27.

Claim 40 recites an article of manufacture for use in a mobile unit communicating data signals using a spread spectrum cellular network with a structure as defined in the specification (pages 7-14) including receiving a signal of another of the plurality of base stations (target base station); and means for determining an interference density to the target base station from the received signal including: i) selecting a code sequence that is at least quasi-orthogonal to all Orthogonal code sequences currently employed by the target base station, ii) synchronizing the selected Orthogonal code sequence with an Orthogonal code sequence boundary of the target base station's pilot sequence, ii) correlating the received signal with a corresponding P/N sequence of the target base station and also with the selected Orthogonal code sequence, and iii) determining an energy of the target P/N correlated, selected code correlated received signal.

Applicant's independent claim 40 comprises a particular combination of elements, which is neither taught nor suggested by the prior art.

Claims 42-52 are allowable based on their dependence of independent claim 40.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

III. Claims 1, 3-14, 16-27, 29-40, and 42-52 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, the phrases "(active base station)" and "(target base station)" render the claim indefinite because it is unclear whether the limitations in parenthesis are part of the claimed invention. See MPEP § 2173.05(d).

Claim 1 recites the limitation "the target base station" in line 8. There is insufficient antecedent basis for this limitation in the claim because the claim refers earlier to "a plurality of base stations" and "base station".

Claim 1 recites the limitation "the selected Orthogonal code sequence" in lines 12 & 15. There is insufficient antecedent basis for this limitation in the claim because the claim refers earlier to "selecting a code sequence".

Claim 1 recites the limitation "the target P/N correlated, selected code correlated received signal" in lines 16-17. There is insufficient antecedent basis for this limitation in the claim because the claim refers earlier to correlating the received signal with "a corresponding P/N sequence".

Claims 14, 27, and 40 contain similar limitations as mentioned in claim 1 above and are rejected under 35 U.S.C. 112, second paragraph given the same reasoning as above.

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Dependent claims 3-13, 16-26, 29-39, and 42-52 are rejected under 35 U.S.C. 112, second paragraph based on their dependence of independent claims 1, 14, 27, and 40 and for containing limitations similar to those mentioned above in claim 1.

Claims 1, 3-14, 16-27, 29-40, and 42-52 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

Claim Objections

IV. Claims 1, 14, 27, and 40 are objected to because of the following informalities:

Claim 1 recites steps ii. in line 12 followed by another step ii. in line 14. Claims 14, 27, and 40 contain similar recitations. These appear to be a grammatical error and appropriate correction is required.

Response to Arguments

V. Applicant's arguments with respect to claims 1, 3-14, 16-27, 29-40, and 42-52 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

VI. Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRANDON J. MILLER whose telephone number is (571)272-7869. The examiner can normally be reached on Mon.-Fri. 8:00 am to 5:00 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, George Eng can be reached on 571-272-7495. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

March 17, 2008

/Brandon J Miller/
Examiner, Art Unit 2617

/George Eng/
Supervisory Patent Examiner, Art Unit 2617